USERS MANUAL

CEO P25

HEARTWAY

HEARTWAY MEDICAL PRODUCTS CO., LTD.

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Part Number: 70030215

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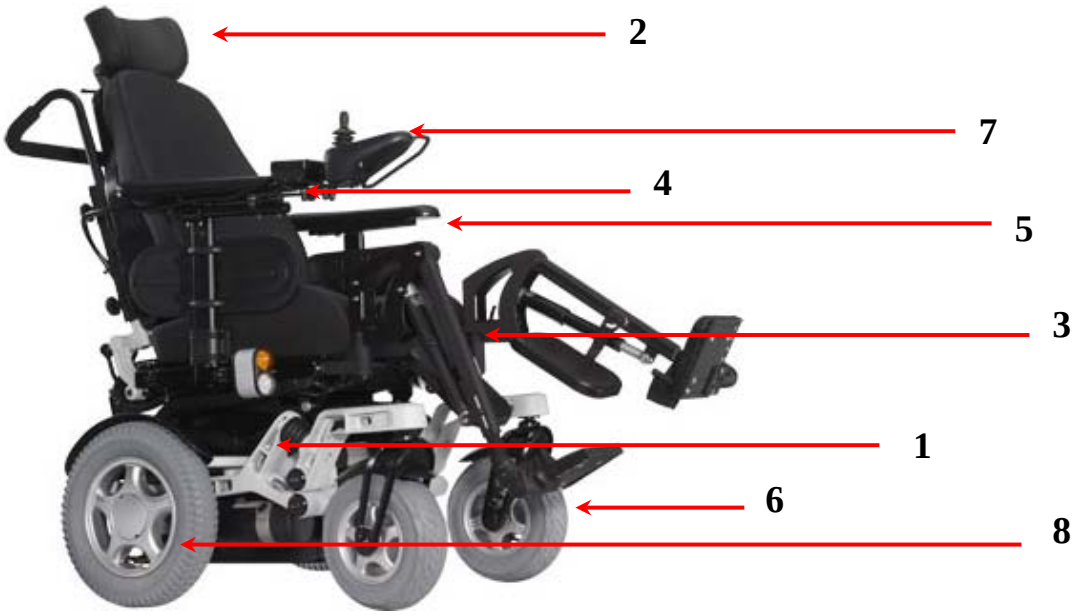
MAIN COMPONENTS

Your power wheelchair is shipped partially dissembled to protect it during shipping. After unpacking, please check whether you have received the following main components as our standard specification (See Figure.1).

1. **Main frame with motor**
2. **Headrest**
3. **Seat Cushion /Backrest**
4. **Right Armrest**
5. **Left Armrest**
6. **Footrest(Left&Right)**
7. **Controller**
8. **Drive Wheel**



(See Figure.1)

SAFETY INSTRUCTION

Operation of Chair

1. Always ensure that the power is switched off when getting in or out of the wheel-chair. This will eliminate the possibility of accidentally activating the joystick and causing injury to yourself or others
2. Always check that the drive wheels are engaged (drive mode) before driving
3. Set the speed control knob according to your driving ability and the environment in which you are going to operate. We recommend that you keep your speed at the slowest position (fully press the deceleration button) until you are familiar with the driving characteristics of the vehicle. We also recommend that you use the slowest speed when using your power wheelchair indoors
4. Always reduce your speed when making sharp turns
5. Do not switch off the power when the wheelchair is still moving forward. This will bring the chair to an extremely abrupt stop
6. Avoid jerky stop/start motions as the will result in excessive current draw from the batteries, increased tire wear and the rapid wearing of the gear boxes and motors
7. To brake in an emergency, simply release the joystick

Ramps and Curbs

1. When driving up or down ramps, be sure to check that the angle of the slope is less than 10 degrees. Also check that ramp surface is roughened to prevent slipping. Never drive across the slope or turn sharply on a slope.
2. When driving up curbs, always check the height of the curb to ensure that it does not exceed 1-1⁄2" (40mm) height.

Transfers, Reaching and Bending

1. Transferring on and off the P25 requires a good sense of balance. To eliminate the possibility of injury, We recommend performing the following tasks before attempting a transfer:

- Position chair so that the distance between your power chair and the object to which you are transferring is close enough for a safe transfer.
- Turn the power off
- Ensure that your power chair not in freewheel mode.
- Flip up or remove armrests
- Flip up footplate or remove footrests
- Turn both caster wheels towards the transfer direction to improve power chair stability during transfer.

2. When reaching, bending or leaning while seated on your power chair, make sure that you maintain a stable center of gravity to keep the power chair from tipping.

General

Always use a seat belt, and keep feet on the footplate at all the time.

1. For safety reasons, make sure that your weight does not exceed the recommended weight limit of the wheelchair. Consult your dealer for the specified weight limits for your particular model.
2. Do not attempt to lift or move a power chair by any of its removable parts. Personal injury and damage to the power chair may result.
3. Do not stand on the footplate directly.
4. Never try to use your wheelchair beyond its limitations as described in this manual.
5. Do not operate your vehicle if it is not functioning properly.
6. Do not connect any electrical or mechanical device to the vehicle. Failure to obey this instruction may result in injury and will void the warranty.
7. Never use electronic radio transmitters such as CB, walkie-talkies, portable computers or cellular phones while using the vehicle without first turning the vehicle off

Use While Under The Influence Of Medication Or Alcohol

1. Check with your physician if you are taking any medication that may affect your ability to operate your power wheelchair safely.
2. Do not operate your vehicle while you are under the influence of alcohol, as this may impair your ability to operate your power chair in a safe manner.

Electromagnetic interference (EMI) from Radio Wave Sources

1. The rapid development of electronics, especially in the area of communications, has saturated our environment with electromagnetic(EM) radio waves that are emitted by television, radio and communication signals. These EM wave are invisible and their strength increases as one approaches the source. All electrical conductors act as antennas to the EM signals and, to varying degrees, all power wheelchairs and scooters are susceptible to electromagnetic interference(EMI). The interference could result in abnormal, unintentional movement and/or erratic control of the vehicle. The United States Food and drug Administration (FDA) suggests that the following statement be incorporated to the user's manual for all power wheelchairs like the P25
2. Be aware of nearby transmitters such as radio or TV stations and try to avoid coming close to them.
3. If unintended movement or brake release occurs, turn the powered wheelchair off as soon as it is safe.
4. Be aware that adding accessories or components, or modifying the powered wheel-chair, may make it more susceptible to interference from radio wave sources.(Note: It is difficult to evaluate the effect on

the overall immunity of the powered wheel-chair).

5. Report all incidents of unintended movement or brake release to the powered wheelchair manufacturer, and note whether there is a radio wave source nearby. Power wheelchairs and motorized scooters (in this section, both will be referred to as powered wheelchairs) may as susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy emitted from sources such as radio stations, TV stations, amateur radio (HAN) transmitter, two-way radios and cellular phones. The interference (from radio wave sources) can cause the powered wheelchair to release its brakes, move by itself or move in unintended directions. It can also permanently damage the powered wheelchair's control system.
6. The intensity of the EM energy can be measured in volts per meter(V/m).Each powered wheelchair can resist EMI up to a certain intensity. This is called "immunity level". The higher the immunity level, the greater the protection. At this time, current technology is capable of providing at least 20 V/m of immunity level, which would provide useful protection against common sources of radiated EMI.

<u>Following the warnings listed below should reduce the chance of unintended brake release or powered wheelchair movement that could result in serious injury:</u>

⇨ Do not turn on hand-held personal communication devices such as citizens band (CB) radios and cellular phones while the powered wheelchair is turned on.

⇨ TURN OFF YOUR POWERED WHEELCHAIR AS SOON AS POSSIBLE WHEN EXPERIENCING THE FOLLOWING:

- Unintentional motions
- Unintended or uncontrollable direction.
- Unexpected brake release

The FDA has written to the manufacturers of power wheelchairs asking them to test new products to be sure they provide a reasonable degree of immunity against EMI. The FDA requires that a powered wheelchair should have an immunity level at least 20 V/m, which provides a reasonable degree of protection against more common sources of EMI.
The higher the immunity level, the greater the protection. Your powered wheelchair has an immunity level of 20 V/m which should protect against common sources of EMI.

ENVIRONMENTAL CONDITIONS

Environmental conditions may affect the safety and performance of your power wheelchair. Water and extreme temperatures are the main elements that can cause damage and affect performance.

Rain, Sleet and Snow

If exposed to water, your power wheelchair is susceptible to damage to electronic or mechanical components. Water can cause electronic malfunction or promote premature corrosion of electrical components and frame.

Temperature

Some of the parts of the power wheelchair are susceptible to change in temperature. The controller can only operate in temperature that range between 18℉(-8℃) and 122℉(50℃).

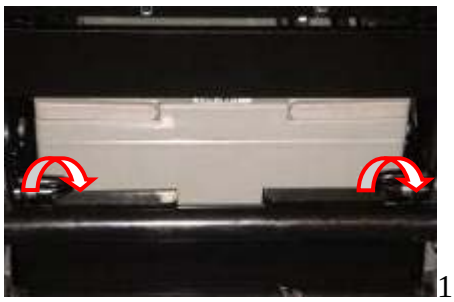
At extreme low temperatures, the batteries may freeze, and your power wheelchair may not be able to operate. In extreme high temperatures, it may operate at slower speeds due to a safety feature of the controller that prevents damage to the motors and other electrical components.

TECHNICAL SPECIFICATIONS

MODEL	P25
WEIGHT CAPACITY	160kgs (350lbs)
SEAT: TYPE/SIZE	18"/20"
DRIVE WHEEL	360mmx75mm(14"x3")
FRONT CASTER (WHEEL)	250mm x 85mm(10"x3.3")
REAR CASTER (ANTI-TIPPER)	75mm x 25mm (3"x1")
MAX SPEED	10KPH(6.3MPH)
BATTERY SPECIFICATIONS	50/80Ah x 2pcs
BATTERY RANGE	35/50km(31miles)
CHARGER TYPE	5amp/8amp,Off Board 120/240 Volt
CONTROLLER TYPE	VR2 90 amp/R-net 90 amp
MOTOR TYPE	5100rpm 450W 27.5:1 x 2pcs
WEIGHT: W/ BATTERY	125 Kgs (275lbs)
WEIGHT: W/O BATTERY	75Kgs (165lbs)
TURNING RADIUS	840mm (33")
SUSPENSION	Full
LENGTH	830mm (32.7")
WIDE	650 mm (25.6")
HEIGHT	1060mm (41.7")
SEAT WIDTH	508mm(20")
SEAT HEIGHT	520mm(20.5")
SEAT DEPTH	415mm(16.3")
BACK HEIGHT	560mm(22")
WHEEL BASE	500mm(19.7")
FOOTRESTS	400mm(15.7")~500mm(19.7")

ASSEMBLY INSTRUCTION

Battery Replacement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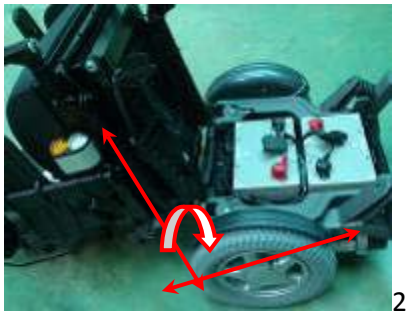
1-1

3

4

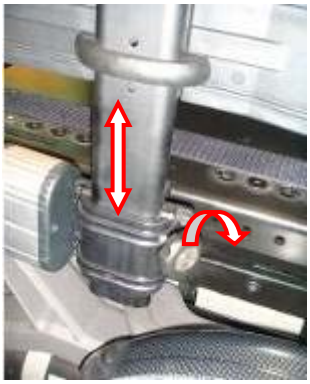

2

- Release the levers on both sides before lifting the saddle. (Figure 1, 1-1)
- Lift the saddle until it forms an angle of 90° with the frame completely and safely before changing the batteries. (Figure 2)
- Make sure that the connecting points (on both sides) are firmly connected and tighten before removing the batteries. (Figure 3)
- Disconnect the battery connectors and then remove the batteries properly (Figure 4)
- Put the saddle back to the original position after battery installation
- Tighten the levers on both sides after putting the saddle back. (Figure 1)

It may be necessary to install the seat either prior to initial operation or after transporting your power chair to the customers.

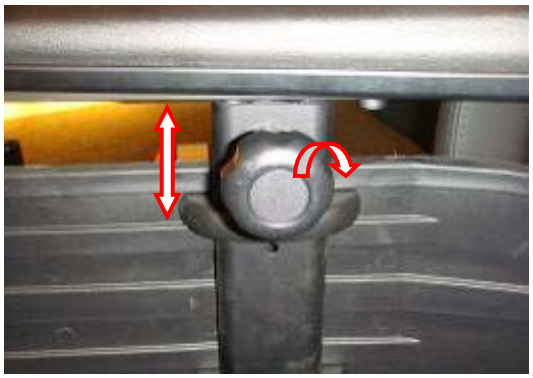
Install The Skirt Guard

Insert the skirt guard support tube into the bracket in the correct direction. Tighten the adjusted knob



Install the Armrest

- Insert the armrest into the bracket to your desired position
- Tighten the knob properly after inserting the armrest



Installing the Backrest

Put the backrest into the saddle set. Make sure the tube fit into the bracket properly. After than, , please tighten the set-screw tightly with the Allen Key.

Installing the Headrest

- Loosen the lever,
- Put the headset into the clamp and then fasten the lever.

Installing the Footrest

- Insert the footrest into footrest frame from side direction then turn around 90 degree to correct direction
- Make sure the lever trip into the correct position

ADJUSTMENTS FOR SEATING COMFORT

To maximize seating comfort, your power wheelchair let you adjust:

- ⇨ Armrest Height
- ⇨ Seat Depth Adjustment
- ⇨ Headrest Angle Adjustment
- ⇨ Backrest Angle Adjustment
- ⇨ Controller position Adjustment

Armrest Height

- ➢ Loosen the knob located on the armrest receiver.
- ➢ Raise or lower the armrest to the desired height
- ➢ Tighten the knob to secure the armrest

Seat Depth Adjustment

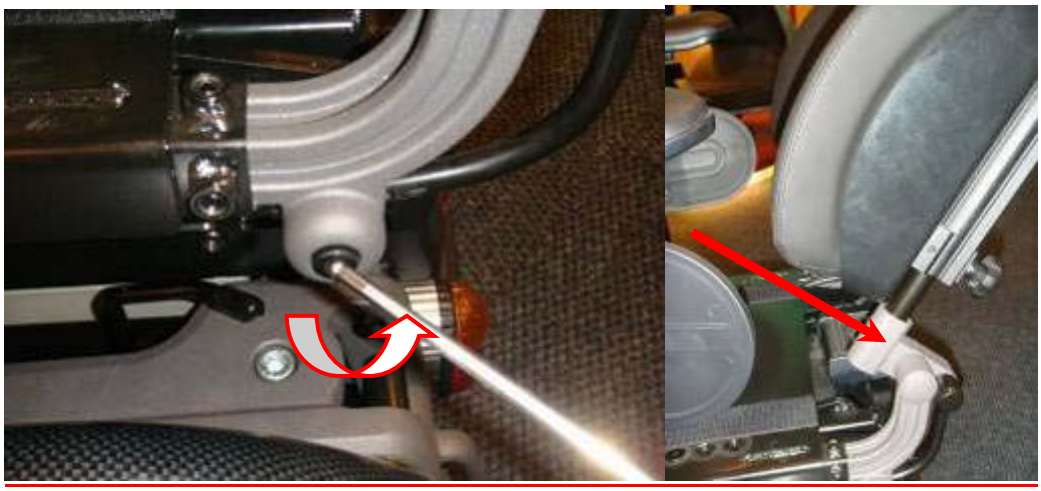
- ➢ Use Allen keys to loosen setscrews on both left & right hand-sides
- ➢ Slide the seat-rest in or out for desired depth
- ➢ Tighten the screws with the Allen Key

Headrest Angle Adjustment

- Loosen the headrest lever
- Turn the headrest to your desired angle
- Tighten the headrest lever

Backrest Angle Adjustment

- Loosen the adjusting screws with Allen key (No # 6)
- Move the backrest to your comfortable angle.
- You can adjust it to different angles at your desired position.
- Set the backrest at the desired angle and then tighten the screws



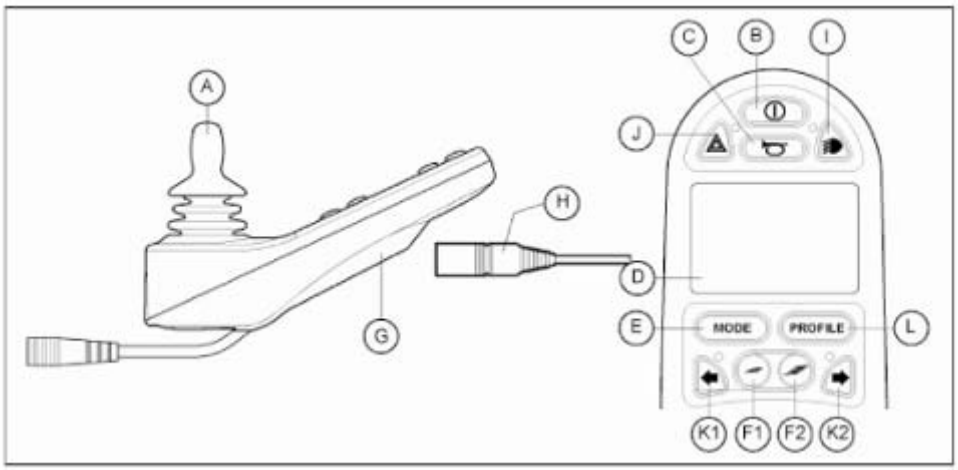
Controller Position Adjustment

- Loosen the setscrew on the controller underneath bracket in order to extend the position of controller (Figure 1)
- Slide the controller into or out of the armrest to the desired position (Figure 2)
- Tighten the setscrew to secure the controller position

Figure 1

Figure 2

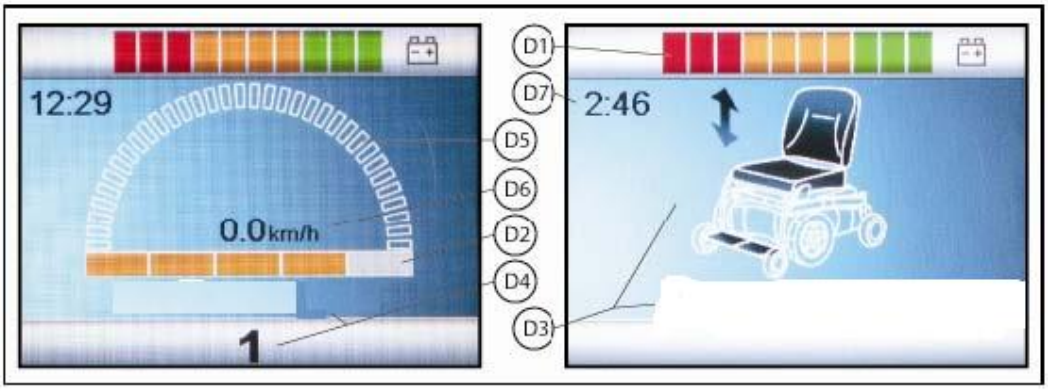
OPERATION



Name	Function
A. Joystick	In the drive mode: driving and steering In the adjustment options mode: ⇨ Left/Right to select the adjustment options ⇨ Front/Back to select the adjustment options
B. On/Off Switch	Switching the controller on or off
C. Horn	Warning signal with sound
D. LCD color display screen	Display and feedback
E. Mode button	Changing between the driving and the adjustment options mode
F1: Speed regulator	Reducing the driving speed (slower)
F2: Speed regulator	Increasing the driving speed (faster)
G.. Charge connector	Input for the battery charger
H. Charge plug for the battery charger	Connector for the battery charger
I.. Lights button	Switching the lights on or off
J. Hazard lights	Warning signal with lights
K1. Direction indicator left	Switching the left direction indicator on or off
K2. Direction indicator right	Switching the right direction indicator on or off
L. Profile button	Selecting driving profile

A Word of Caution

The power wheelchair is simple to operate. However, we recommend that you read carefully the following instructions to become familiarized with your new vehicle. Before you turn the power on, always be aware of the environment that surrounds you to select your desired speed. For indoor environments we recommend that you select the slowest speed setting. For outdoor operation of this vehicle we recommend that you select a speed that is comfortable for you to control it safely. The following steps are required to operate your vehicle safely with the P25 controller



Indication	Function
D1: Battery Indicator	Displays the power level of the battery
D2: Maximum Speed	Displays the maximum speed limit as set by the user
D3: Adjustment option	Displays the selected adjustment options
D4: Profile	Displays the selected profile
D5: Speed indicator	Displays a graph of the actual speed
D6: Kilometer (Mileage) counter	Displays the actual speed
D7: Clock	Displays the time

How to perform Lifting Function on P25

- ⇨ Press “Power” button to turn on P25 power wheelchair
- ⇨ Press the mode button and move the joystick right/ left to select Lifting Function
- ⇨ Move the joystick up to lift the seat and down to descend the seat

How to perform Tilting Function on P25

- ⇨ Press “Power” button to turn on P25 power wheelchair
- ⇨ Press the mode button. Move the joystick right/ left to select Tilting Function
- ⇨ Move the joystick up to tilt the seat

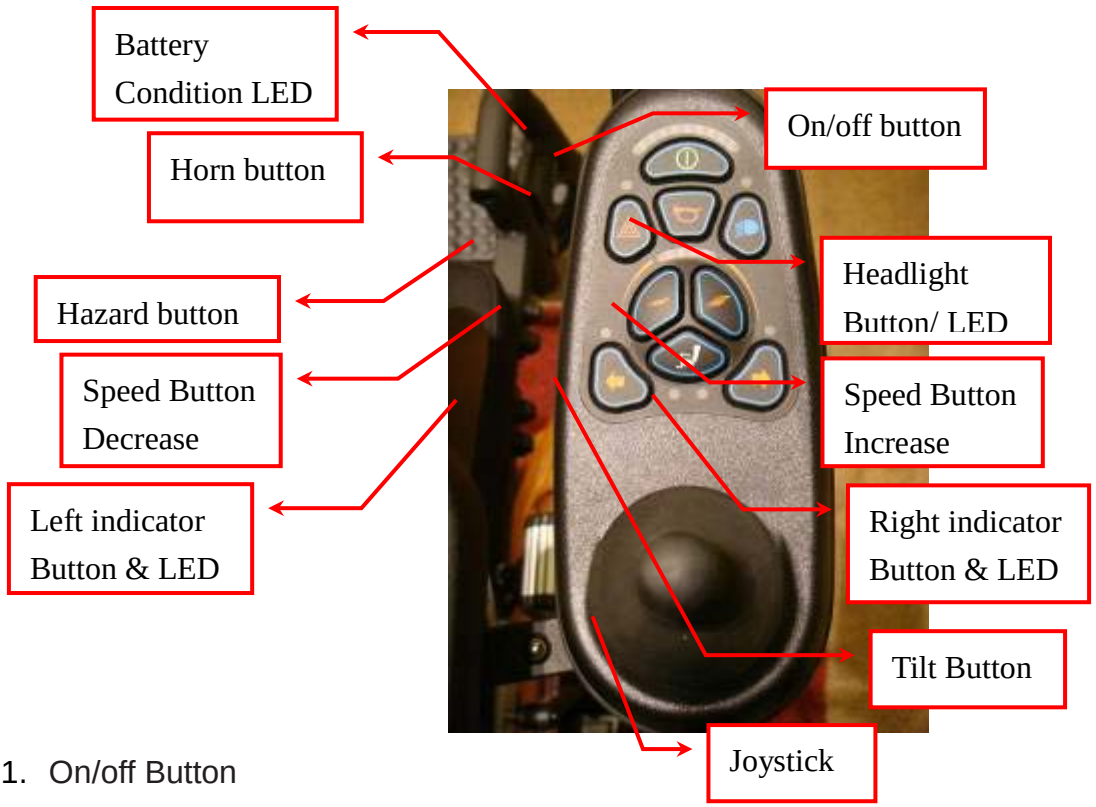
How to perform Power-Legrest Tilting Function on P25

- ⇨ Press “Power” button to turn on P25 power wheelchair
- ⇨ Press the Mode button. Move the joystick right/ left to select Power-Legrest Tilting Function
- ⇨ Move the joystick up to tilt the legrest

The power wheelchair is simple to operate. However, we recommend that you read carefully the following instructions to become familiarized with your new vehicle.

A Word of Caution:

Before you turn the power on, always be aware of the environment that surrounds you to select your desired speed. For indoor environments we recommend that you select the slowest speed setting. For outdoor operation of this vehicle we recommend that you select a speed that is comfortable for you to control it safely. The following steps are required to operate your vehicle safely with the P25 controller.



1. On/off Button
   The on/off button applies power to the control system electronics, which in turn supply power to the wheelchair's motors. Do not use the on/off button to stop the wheelchair unless there is an emergency. (If you do, you may shorten the life of the wheelchair drive components).
2. Horn Button
   The Horn will sound while this button is depressed.
3. Speed Decrease Button
   This button decreases the maximum speed setting. Depending on the way the control system has been programmed a momentary screen may be displayed when the button is pressed.
4. Speed Increase Button
   This button increases the maximum speed setting. Depending on the way the control system has been programmed a momentary screen may be displayed when the button is pressed.
5. Mode Button
   The Mode button allows the user to navigate through the available operating Modes for the control system. The available modes are dependent on programming and the range of auxiliary output devices connected to the control system.
6. Profile Button
   The Profile button allows the user to navigate through the available Profiles for the control

system. The number of available Profiles is dependent on how the control system is programmed. Depending on the way the control system has been programmed a momentary screen may be displayed when the button is pressed.

7. Hazard Warning Button and LED

   This button activates and de-activates the wheelchairs hazard lights. Depress the button to turn the hazards on and depress the button again to turn them off. When activated the hazard LED and the indicator LED's will flash in sync with the wheelchair's indicators.

8. Lights Button and LED

   This button activates and de-activates the wheelchairs lights. Depress the button to turn the lights on and depress the button again to turn them off. When activated the lights LED will illuminate.

9. Left Indicator Button and LED

   This button activates and de-activates the wheelchair's left indicator. Depress the button to turn the indicator on and depress the button again to turn it off. When activated the left indicator LED will flash in sync with the wheelchair's indicator.

10. Right Indicator Button and LED

    This button activates and de-activates the wheelchair's right indicator. Depress the button to turn the indicator on and depress the button again to turn it off. When activated the right indicator LED will flash in sync with the wheelchair's indicator.

Free-Wheeling

Because the motors are designed to engage the electromagnetic brakes when the vehicle is not in use or when the power is OFF, they also have a manual feature that allows them to “free-wheel”. Free-wheeling is accomplished by turning the free-wheeling levers to the freewheeling position

Warning !

- Never free-wheel your power wheelchair on a slope.
- Never free-wheel the motors while operating your vehicle.
- Always remember to engage the motors before turning the power back ON.

Electromagnetic Brakes

Your power wheelchair comes with an Electromagnetic Brakes., i.e. an automatic magnetic disc safety brake which is also known as Fail-Safe brake. The Electromagnetic Brakes are automatic and work when the power wheelchair is ON but in a steady state (i.e. Joystick is released to the neutral position), even when the chair is on a slope. The Electromagnetic Brakes will also be set when-ever the power wheelchair is OFF, but the motor levers are in the engaged (vertical) position.

Note: Please refer to the section titled to check brake in the Maintenance & Repair section in page 21 to make sure brakes are in good condition.

A. Thermal Protection:

Your power wheelchair controller is equipped with a safety system called thermal rollback. A built-in circuit monitors the temperature of the controller and motors by which the controller can reduce the motor voltage and speed of the power wheelchair. The reduction of the speed allows the electrical components to cool down. Although your power wheelchair will resume its normal speed when the temperature returns to a safe level, we recommend that you turn the power off and wait for 5 minutes before restarting to allow the components to cool down if you find that you have lost speed suddenly.

B. Main Circuit Breaker:

The main circuit breakers reset button located near the seat of the back side on the main

frame.(Figure 26) The main circuit breaker monitors the electric current drawn from the battery. It is a safety feature built in your power wheelchair for your extra safety. When the batteries and motors are heavily strained (e.g., from excessive loads),the main circuit breaker will trip to prevent damage to the motor and the electronics. If the circuit breaker trips, wait for approximately one minute and then depress the button to reset it. Then turn on the controller power, and continue normal operation. If the main circuit breaker continues to trip repeatedly, contact your authorized dealer.

BATTERY & CHARGER

BATTERY

We recommend that you use deep-cycle batteries that are sealed and maintenance free for your power wheelchair. Both sealed lead-acid (SLA) and gel cell are deep-cycle batteries and are similar in performance. Deep-cycle batteries are specifically designed to provide power, drain down, and then accept a relatively quick recharge. Lead-acid batteries should be charge as often as possible.

Specification of the battery that we recommend:

Type:	Deep –cycle sealed lead-acid or gel cell
Size:	62Ah
Voltage:	12V each
Amp Hours:	62 amp hours

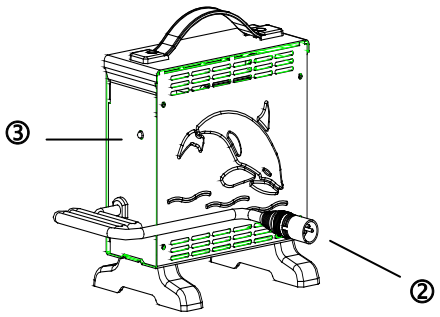
Depending on the use, terrain and driving conditions, the batteries will provide a range of 12-18 miles of travel. However, even if the power chair is not in use, we recommend that the batteries be charged periodically.

Note:

- Do not use any automotive batteries. They are not designed to handle a long, deep discharge and also are unsafe for use in power chairs.

Battery Charger Instruction

1. APPEARANCE



8A

①Power Cord
②Output Plug to Battery
③Indicator :
Green Flash : Power On
Orange Flash : Pre Charge
Orange : Charging
Green&Orange Flash : Charged 80%
Green : Full Charge
Red Flash：Defect

Important!

Make sure voltage input is correctly selected for your local regulation (110V or 220V)

2. **SPECIFICATION**

Item	BATTERY CHARGER (SWITCHING MODE)
Model	4C24080A
Output Current(DC)	8A±5%
Charging Voltage(DC)	28.8V
Floating Voltage(DC)	27.6V
Input Current (AC)	3.8A max.
Input Voltage(AC)	100 ~ 240 V 50/60Hz
Efficiency	AC-DC 85% min
Operating Temperature	0°C ~ 40°C
Switching Method	SWITCHING MODE
Charging Method	Constant current two stage constant voltage
Battery Application	24V Lead Acid Rechargeable Battery (26Ahr ~ 75Ahr)
Output Detection	1.Short Circuit Protection 2.Reverse Power Protection 3.Overheat Protection 4.Charging Plug Protection
Operating Humidity	20％ ~ 85 %
Measure	L 185mm×W 130mm×H 195mm
Weight	1.7K g
Color	Blue

3. CHARGER OPERATING INSTRUCTION

(1)Make sure the battery charger output voltage is the same as the connecting battery.

(2)Plug in the power cord. LED indicates green flash when AC power on.

(3)Connect the battery charger to the battery.

(4)Start charging ; please refer to 4. LED INDICATION

4. LED INDICATION

(1)Green Flash：Power on

(2)Orange：Charging

(3)Orange Flash：Pre charge

(4)Green&Orange Flash：Charged 80%。

(5)Green：Full charged(Floating charge)。

(6)Red Flash：Defect

5. TROUBLE SHOOTING

(1) If green indicator is off：

. Check AC input. If it works normally, the battery charger may be defect.

(2) If green indicator keeps flashing , can’t turn to charging indication：

. Check if the battery connect successfully.

. Check if the output connection is short or open.

. If the battery connection is normally , the battery charger may be defect.

(3) If red indicator keeps flashing ：

. Check if the battery connection is reversed.

. Check if the output connection is short or open.

. Check if the environment temperature is too low (0^{o}C)

. If the red indicator still keeps flashing , the battery charger may be defect .

(4) Charging indicator (orange) can’t turn to green：

. The battery might defect , please stop charging and have the battery be repaired.

(5) If the charging indicator (orange) turns green (fully charged) immediately：

. The battery may be in well-charged condition

. If the battery is not fully charged, the battery may be defective.

6. CAUTION

(1) Before using the battery charger, read all instructions and cautionary markings.

(2) Use the battery charger in a well-ventilated area

(3) To avoid the risk of injury, charge only lead-acid or gel cell type rechargeable batteries.

(4) Please turn off the power after charging

MAINTENANCE & REPAIR

Your power wheelchair is designed for minimal maintenance. However, like any motorized vehicle it requires routine maintenance. To keep your P25 for years of trouble-free operation, we recommend you follow the following maintenance checks as scheduled.

DAILY CHECKS

- With the controller turned OFF, perform a joystick check. Make sure it is not bent or damaged and that it returns to center when you release it. Visually inspect the rubber boot around the base of the joystick for damage. Do not handle or try to repair it.
- Visually inspect the controller harnesses. Make sure that they are not frayed, cut or have any exposed wires.
- Inspect the battery condition meter on the controller to determine if batteries need to be charged.

WEEKLY CHECKS

- Inspect the connections by disconnecting the controller and charger harnesses from the electronics connector housing. Look for signs of corrosion.
- Ensure that all parts of the controller system are securely fastened to your power wheelchair. Do not over tighten any screws.
- Check for proper tire inflation. Your power wheelchair comes with standard flat-free solid tires. If your power wheelchair comes with optional air tires, make sure to maintain the tire pressures between 30-35 psi.
- Check the brakes

- ✧ Turn on the controller and turn down the speed level of your power wheelchair
- ✧ After one second, check the battery condition meter and make sure that it remains on,
- ✧ Slowly push the joystick forward until you hear the electric brakes clicks. Immediately release the joystick. You must be able to hear each electrical brake operating within a few seconds of joystick movement. Repeat this test three times, pushing the joystick backward, then left, and then right.

SEMI-ANNUAL CHECKS

- Check the motor brushes. We recommended that your authorized dealer inspect the bushes every six months, or sooner if your power wheelchair is not operating smoothly. If inspection determines excessive wear on the brushes, they must be replaced or motor damage will result.

Warning! Failure to maintain the brushes could void the power wheelchair warranty.

To inspect or replace the motor brushes:

1.Unscrew the motor brush caps.
2.Remove the brushes.
3.Inspect the brushes for wear
4.Replace the brushes if necessary.

1. Inspect the state of the battery terminals every six months. Make sure that they are not corroded and the connections are tight. Periodically apply a thin film of petroleum jelly on the surface of terminals to guard against corrosion.

PERIODICAL CHECKS

1. Make sure to keep the controller clean while protecting it from rain or water. Never hose off your power wheelchair or place it in direct contact with water.
2. Keep wheels free from lint, hair, sand and carpet fibers.
3. Visually inspect the tire tread. If less than 1⁄32”, please have your tires replaced by your local dealer.
4. All upholstery can be washed with warm water and mild soap. Occasionally check the seat and back for sagging, cuts and tears. replace if necessary. Do not store your chair in damp conditions as this will lead to mildew and rapid deterioration of the upholstery parts.
5. All moving mechanism will benefit from simple lubrication and inspection. Lubricate using petroleum jelly or light oil. Do not use too much oil, otherwise small drips could stain and damage carpets and furnishings etc. Always perform a general inspection of the tightness of all nuts and bolts.

Note:

⇨ If you experience any technical problems, it is recommended that you check with your local dealer before attempting to troubleshoot on your own.

⇨ If you get one of these error codes, contact your local dealer.

Troubleshooting

Trip Text	Trip Code	Description
Latched Timeout	-	This occurs when the control system detects that the Latched Timeout programmed time has been exceeded. For example, the Input Device, Joystick, Head Aray, Sip and Puff, etc.) has not been operated frequently enough. The trip is a notification of why the control system has dropped out of Latched Mode. • Cycle the power. • Initiate Latched Mode. If the trip is still present after the above checks have been made, then the Input Device may be defective.
Brake Lamp Short	-	This occurs when the control system detects a short in the Brake Lamp Circuit. • Check the brake lamps, cables and connections to the control system. If the trip is still present after the above checks have been made, then the ISM may be defective.
Left Lamp Short	7205	This occurs when the control system detects a short in either of the Lamp Circuits. • Check the lamps, cables and connections to the control system. If the trip is still present after the above checks have been made, then the ISM may be defective.
Right Lamp Short	7209	This occurs when the control system detects a short in either of the Lamp Circuits. • Check the lamps, cables and connections to the control system. If the trip is still present after the above checks have been made, then the ISM may be defective.
Left Indicator Lamp Short	7206	This occurs when the control system detects a short in either of the Indicator Circuits. • Check the indicators, cables and connections to the control system. If the trip is still present after the above checks have been made, then the ISM may be defective.
Left Indicator Lamp Failed	7207	This occurs when the control system detects a failure in either of the Indicator Circuits. This is most likely to be an indicator bulb failure. • Check the indicator bulbs, cables and connections to the control system. If the trip is still present after the above checks have been made, then the ISM may be defective.
Right Indicator Lamp Failed	7208	This occurs when the control system detects a failure in either of the Indicator Circuits. This is most likely to be an indicator bulb failure. • Check the indicator bulbs, cables and connections to the control system. If the trip is still present after the above checks have been made, then the ISM may be defective.
Over Current	-	This occurs when the control system detects an excessive amount of current in an Actuator Channel. This may be due to a faulty endstop switch, actuator motor, cables or connections. • Check the movement of the actuator is not obstructed. • Check the endstop switches (if fitted) are terminating the power to the actuator motor. If the trip is still present after the above checks have been made, then the ISM may be defective.
Overtemp. (Actuators)	-	This occurs when the control system detects that the ISM's actuator circuitry has become too hot. The control system will cease drive to the actuator motor in question. • Allow the ISM to cool. • If the ISM is frequently overheating check the condition of the actuator motors and the connections to them. • If the trip persists contact your service agent.

Trip Text	Trip Code	Description
Overtemp. (Lamps)	-	This occurs when the control system detects that the ISM's actuator circuitry has become too hot. The control system will cease drive to the actuator motor in question. • Allow the ISM to cool. • If the ISM is frequently overheating check the condition of the actuator motors and the connections to them. • If the trip persists contact your service agent.
DIME Error	-	This occurs when the control system detects an identification conflict between two modules in the system. If a new module has been introduced: • Disconnect the new module and cycle the power. • If no trip is present connect the new module to the system and cycle the power. • If the trip reappears then the new module must be the cause of the problem. If there has been no additions: • Disconnect one module at a time and cycle the power. If the trip is still present after the above checks have been made, contact your service agent.
Memory Error	-	This is a non specific memory error which could be caused by any of the modules within the system. • Check all cables and connections. • Cycle the power. If the trip is still present and the system contains 3rd party Modules: • Disconnect all the non PGDT modules and cycle the power. If this has cleared the trip: • Connect each 3rd party module in turn, cycling the power each time. • If the trip reappears after one of the power cycles then the last module to have been added to the system must be defective. If the trip is still present after the above checks have been made, then the PM may be defective.
PM Memory Error	-	This is a specific Power Module based trip. • Check all cables and connections. • Using the R-net PC Programmer, re-program the control system. This should be done with either the most current specific program file for the wheelchair or the manufacturers original programming file. If the trip is still present after the above checks have been made, then the PM may be defective.
Bad Cable	-	This occurs when the control system detects a fault in the wiring in the communication cables between any of the modules. • Check all cables and connections for continuity. • If there is any visible damage to cables, replace and cycle power. • Disconnect one cable from the system at a time cycling the power after each disconnection. If the trip is still present after the above checks have been made, then the PM may be defective.
Bad Settings	-	This occurs when the control system detects incorrect or invalid program settings. • Check all parameter settings and re-program the control system using the R-net PC Programmer. • Make a note of the current parameter settings and then reset the control system to default settings. • Re-program the required settings in small groups, cycling the power after each group to see if the trip occurs. If the trip is still present after the above checks have been made, then the PM may be defective.
Module Error	-	This occurs when the control system detects a trip within a specific module. The module will be identified on the diagnostics Screen. • Check all cables and connections. • Cycle the power. If the trip is still present after the above checks have been made, then the module identified may be defective.

Trip Text	Trip Code	Description
System Error	-	This occurs when the system detects a trip which cannot be attributed to a specific module. • Check all cables and connections. • Cycle the power. If the trip is still present and the system contains 3rd party Modules: • Disconnect all the none PGDT modules and cycle the power. If this has cleared the trip: • Connect each 3rd party module in turn, cycling the power each time. • If the trip reappears after one of the power cycles then the last module to have been added to the system must be defective. If the trip is still present after the above checks have been made, then the PGDT control system may be defective.
SID Detached	-	The Omni has detected that the Specialty Input Device (SID) has become disconnected. • Check all cables and connectors between the Omni and the SID. If the error persists: • Check that the setting of the parameter, 9-Way Detect, is appropriate for the SID that is being used. For example, if the SID has no detect-link, then this parameter should be set to Off. If the trip is still present after the above checks have been made, then the Input Device may be defective. Contact your service agent.
User Switch detached	-	The Omni has detected that the User Switch has become disconnected. • Check all cables and connectors between the Omni and the User Switch. If the trip is still present after the above checks have been made, then the User Switch may be defective. Contact your service agent. If it is required to use the Omni without a User Switch being connected, then the parameter, Switch Detect, should be set to Off. If a User Switch is not used the responsibility for that decision lies with the healthcare professional.
Gone to Sleep	-	This occurs when the control system has been left inactive for a time greater than the parameter Sleep Timer. An entry is made in the system log each time this occurs.
Charging	-	This occurs when the control system detects that a charger is connected to either Inhibit 1 or Inhibit 3. Refer to section 2.3 for connection details The Battery charging screen will be displayed during charger connection. An entry is made in the system log each time this occurs. If an On-Board Charger is used: • Disconnect the charger from the AC supply. If an Off-Board Charger is used: • Disconnect the charger from the Wheelchair. If the trip is still present after the charger has been disconnected then the Joystick Module may be defective.

The following symptoms could indicate a serious problem with your power wheelchair.

Contact your local dealer if any of the following arises:

- Motor noise
- Frayed harnesses
- Cracked or broken connectors
- Uneven wear on any of tires
- Jerky motion
- Pulling to one side
- Bent or broken wheel assemblies
- Does not power up
- Powers up, but does not move

CARE AND MAINTENANCE

Storage

- Your power chair should be stored in a dry place, free from temperature extremes. When storing, disconnect the batteries from the power chair. If you fail to store the unit properly, the frame can rust and the electronics can be damaged.

- Batteries that are regularly and deeply discharged, infrequently charged, stored in extreme temperatures, or stored without a full charge may be permanently damaged, causing unreliable performance and limited service life. It is recommended that you charge the batteries periodically throughout periods of prolonged storage to ensure proper performance. You may wish to place several boards under the frame of your power chair to raise it off of the ground during periods of prolonged storage.

Disposal of Your Power Chair

- Your power chair must be disposed of according to applicable local and national statutory regulations. Contact your local waste disposal agency or authorized dealer for information on proper disposal of power chair packaging, metal frame components, plastic components, electronics, batteries, neoprene, silicone, and polyurethane materials.

Cleaning and Disinfection

- Use a damp cloth and mild, non-abrasive cleanser to clean the plastic and metal parts of your power chair. Avoid using products that may scratch the surface of your power chair.

- If necessary, clean your product with an approved disinfectant. Make sure the disinfectant is safe for use on your product before application. Follow all safety instructions for the proper use of the disinfectant and/or cleaning agent before applying it to your product. Failure to comply may result in skin irritation or premature deterioration of upholstery and/or power chair finishes.

Wheel Replacement

- If you have pneumatic tires and you have a flat tire, replace the tube. If your chair is equipped with a solid tire insert, then you must replace the whole wheel assembly. Replacement tires, tubes, and wheel assemblies are readily available through your authorized dealer. The wheels on your power chair should only be serviced or replaced by an authorized dealer. Be sure that the power to the controller is turned off and the power chair is not in freewheel mode before performing this procedure. When changing a tire, remove only the center lug nut and washer then remove the wheel. If any further disassembly is required, deflate the tire completely or it may explode.

Battery Replacement

- A battery wiring diagram is printed on a decal located on the power base. Battery posts, terminals, and related accessories contain lead and lead compounds. The batteries in your power chair should only be serviced or replaced by an qualified technician.
- Do not replace batteries when seat is occupied. Power chair batteries are heavy. See specifications table. If you are unable to lift that much weight, be sure to get help.
- Do not mix old and new batteries. Always replace both batteries at the same time. Keep tools and other metal objects away from the battery terminals. Contact with tools can cause electrical shock.

When to Contact Your Authorized Dealer for Service

The following symptoms could indicate a serious problem with your power chair. If necessary, contact your authorized dealer. When calling, have the model number, serial number, nature of the problem, and the error code if available.

- ⇨ Motor noise
- ⇨ Frayed harnesses
- ⇨ Cracked or broken connectors
- ⇨ Uneven wear on any of the tires
- ⇨ Jerky motion
- ⇨ Pulling to one side
- ⇨ Bent or broken wheel assemblies
- ⇨ Does not power up
- ⇨ Powers up, but does not move

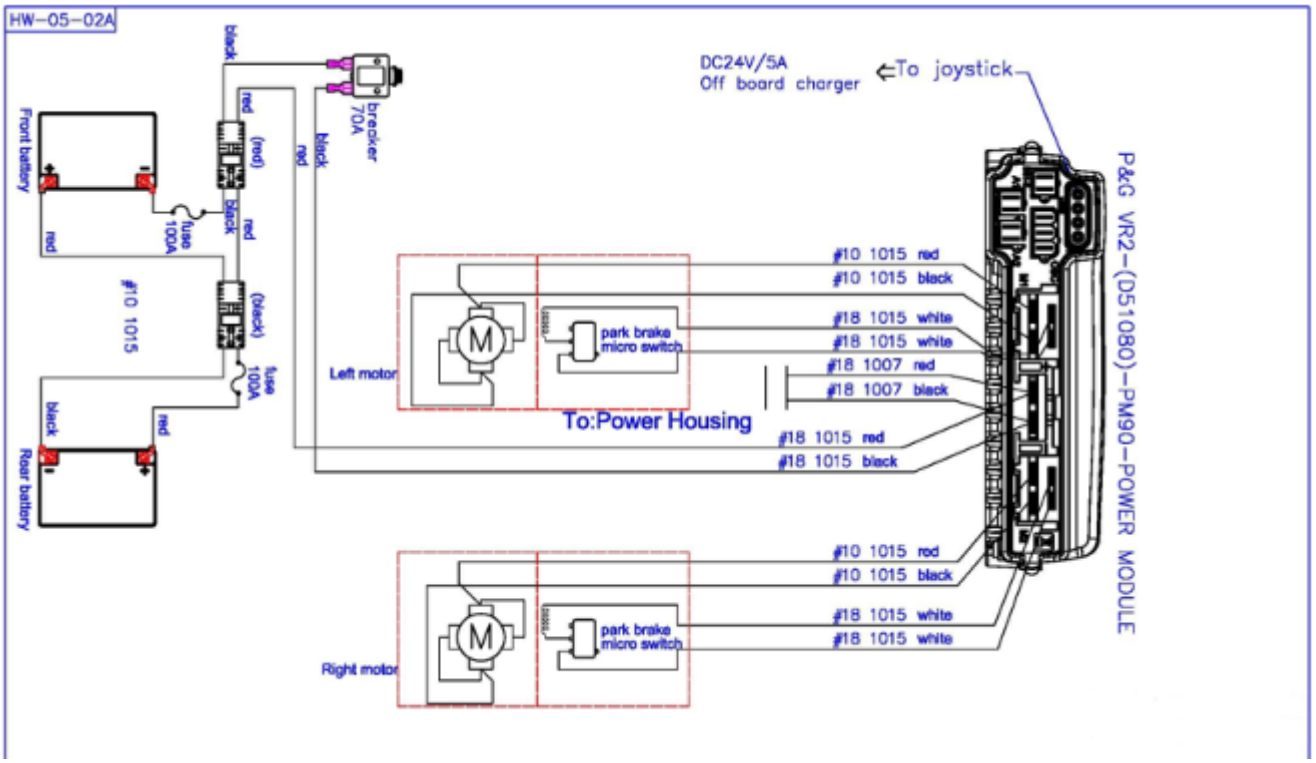
Corrective Maintenance

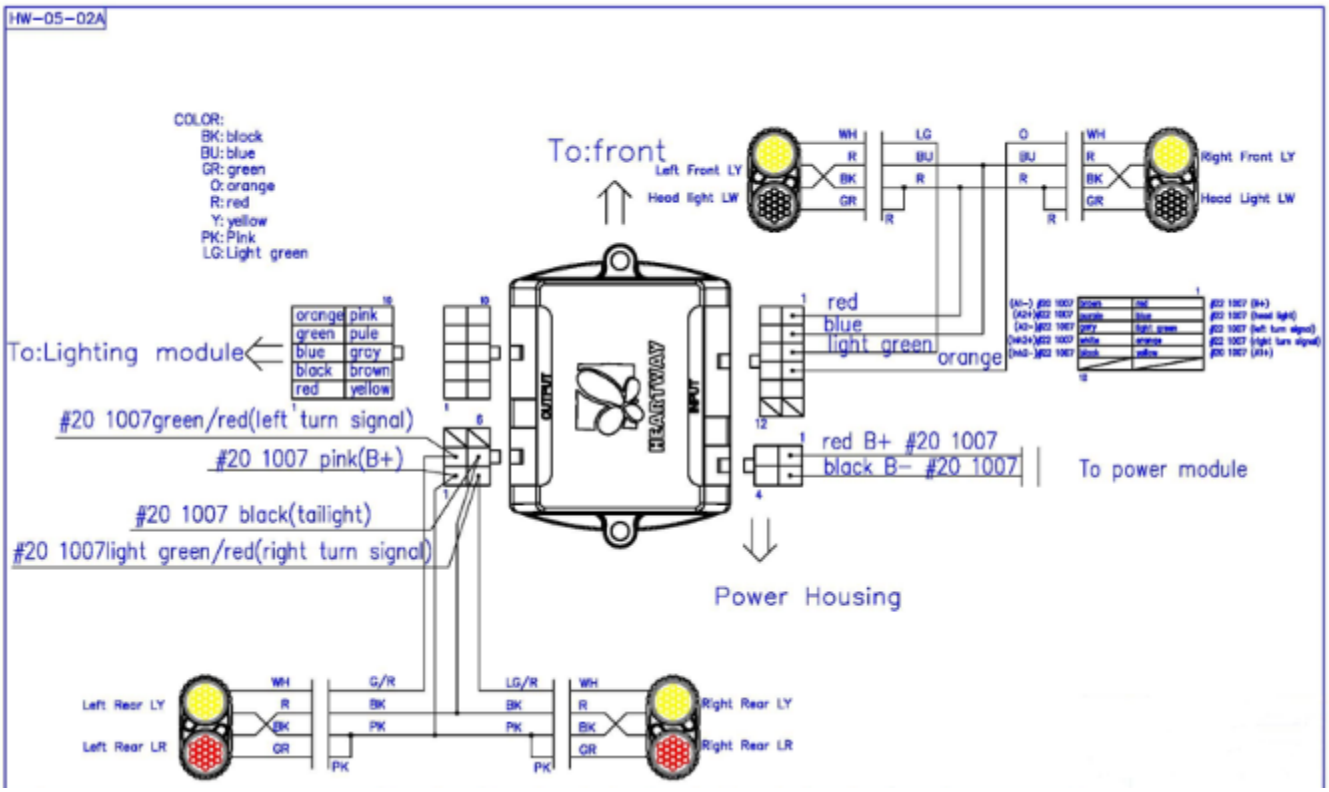
If the battery condition meter does not light up when you turn on the power:

- ⇨ Check the harness connections. Make sure they are tight.
- ⇨ Check the circuit breaker. Reset it if necessary.
- ⇨ Check the battery connections.

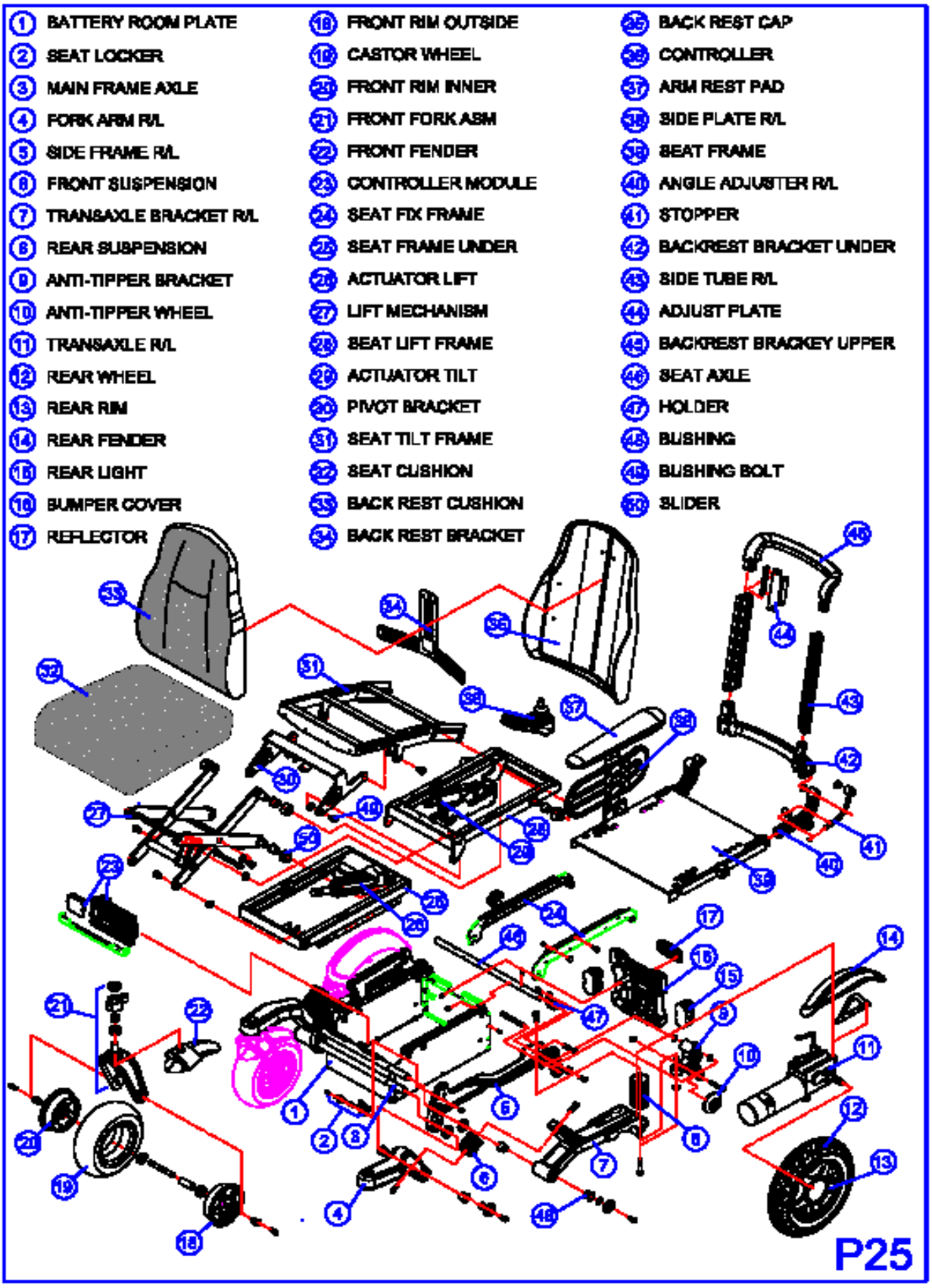
If the above conditions prove normal, you can load test the batteries with a battery load tester. These testers are available at automotive parts stores. Disconnect both batteries before load testing and follow the directions that come with the load tester. If either one of the batteries fails the load test, replace both of them. If your power chair still does not power up, contact your authorized dealer.

CIRCUIT DIAGRAM





BOM DRAWINGS



WARRANTY DECLARATION

Quality/ Warranty Declaration

Products are to be fit for purpose and of excellent quality and performance. For valid warranty claims Heartway will, at their discretion, replace/ repair/ refund items mutually agreed to be defective.

Heartway's Warranty as Following:

- Frame: Two-year limited warranty
- Controllers: One-and-a-half-year limited warranty
- Electronic Components and Charger: One-year limited warranty
- Warranty Exclusion. The following items are not covered by warranty.

✧ Motor brushes	✧ Wheel Tires	✧ Arm Pads
✧ Seat Cushion	✧ Fuses / Bulbs	✧ Tiller Cover
✧ Rear Shroud	✧ Front Shroud	✧ Batteries and Consumable parts

Any damage or defect of any nature occurring from the misuse, abuse of the product, improper operation or improper storage is not to be covered. The warranty is to start from the date of arrival of our products.

HEARTWAY

HEARTWAY MEDICAL PRODUCTS CO., LTD.

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